

(1) GENERAL INFORMATION:

(i) APPLICANT: Magal, Ella
Delaney, John M.(ii) TITLE OF INVENTION: METHOD FOR PREVENTING AND TREATING
HEARING LOSS USING A NEURTURIN PROTEIN PRODUCT

(iii) NUMBER OF SEQUENCES: 5

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: Amgen Inc.
(B) STREET: One Amgen Center Drive
(C) CITY: Thousand Oaks
(D) STATE: California
(E) COUNTRY: USA
(F) ZIP: 91320-1789

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.30

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: US
(B) FILING DATE: 29-JUN-1998
(C) CLASSIFICATION:

(vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: US 60/054184
(B) FILING DATE: 30-JUL-1997

(viii) ATTORNEY/AGENT INFORMATION:

(A) NAME: Curry, Daniel R.
(B) REGISTRATION NUMBER: 32,727
(C) REFERENCE/DOCKET NUMBER: A-444

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 102 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Arg | Leu | Gly | Ala | Arg | Pro | Cys | Gly | Leu | Arg | Glu | Leu | Glu | Val | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| Val | Ser | Glu | Leu | Gly | Leu | Gly | Tyr | Ala | Ser | Asp | Glu | Thr | Val | Leu | Phe |
| | | | 20 | | | | | 25 | | | | | 30 | | |
| Arg | Tyr | Cys | Ala | Gly | Ala | Cys | Glu | Ala | Ala | Ala | Arg | Val | Tyr | Asp | Leu |
| | | 35 | | | | | 40 | | | | | 45 | | | |
| Gly | Leu | Arg | Arg | Leu | Arg | Gln | Arg | Arg | Arg | Leu | Arg | Arg | Glu | Arg | Val |
| | 50 | | | | | 55 | | | | | 60 | | | | |

Arg Ala Gln Pro Cys Cys Arg Pro Thr Ala Tyr Glu Asp Glu Val Ser
65 70 75 80

5 Phe Leu Asp Ala His Ser Arg Tyr His Thr Val His Glu Leu Ser Ala
85 90 95

Arg Glu Cys Ala Cys Val
100

10

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 100 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

15

(ii) MOLECULE TYPE: protein

20

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Pro Gly Ala Arg Pro Cys Gly Leu Arg Glu Leu Glu Val Arg Val Ser
1 5 10 15

Glu Leu Gly Leu Gly Tyr Thr Ser Asp Glu Thr Val Leu Phe Arg Tyr
20 25 30

Cys Ala Gly Ala Cys Glu Ala Ala Ile Arg Ile Tyr Asp Leu Gly Leu
35 40 45

Arg Arg Leu Arg Gln Arg Arg Arg Val Arg Arg Glu Arg Ala Arg Ala
50 55 60

His Pro Cys Cys Arg Pro Thr Ala Tyr Glu Asp Glu Val Ser Phe Leu
65 70 75 80

Asp Val His Ser Arg Tyr His Thr Leu Gln Glu Leu Ser Ala Arg Glu
85 90 95

Cys Ala Cys Val
100

25

30

35

40

45

50

55

60

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 312 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: CDS
 (B) LOCATION: 1..309

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

ATG GCA CGT CTG GGT GCT CGT CCG TGT GGT CTG CGT GAA CTG GAA GTT
48

Met Ala Arg Leu Gly Ala Arg Pro Cys Gly Leu Arg Glu Leu Glu Val
65 1 5 10 15

A-444A

- 75 -

5 CGT GTT TCC GAA CTG GGT CTG GGT TAC GCT TCC GAC GAA ACC GTT CTG
96
Arg Val Ser Glu Leu Gly Leu Gly Tyr Ala Ser Asp Glu Thr Val Leu
20 25 30

10 TTC CGT TAC TGT GCA GGT GCT TGT GAA GCA GCT GCA CGT GTT TAC GAC
144
Phe Arg Tyr Cys Ala Gly Ala Cys Glu Ala Ala Ala Arg Val Tyr Asp
35 40 45

15 CTG GGT CTG CGT CGC CTG CGT CAG CGC CGT CGC CTG CGT CGC GAA CGT
192
Leu Gly Leu Arg Arg Leu Arg Gln Arg Arg Arg Leu Arg Arg Glu Arg
50 55 60

20 GTT CGC GCA CAG CCG TGT TGC CGT CCG ACC GCA TAC GAA GAC GAA GTT
240
Val Arg Ala Gln Pro Cys Cys Arg Pro Thr Ala Tyr Glu Asp Glu Val
65 70 75 80

25 TCC TTC CTG GAC GCT CAC TCC CGT TAC CAC ACC GTT CAC GAA CTG TCC
288
Ser Phe Leu Asp Ala His Ser Arg Tyr His Thr Val His Glu Leu Ser
85 90 95

30 GCA CGT CAC TGT GCG TGT GTT TAA
312
Ala Arg His Cys Ala Cys Val
100

(2) INFORMATION FOR SEQ ID NO:4:

35 (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 103 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

40 (ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

45 Met Ala Arg Leu Gly Ala Arg Pro Cys Gly Leu Arg Glu Leu Glu Val
1 5 10 15
Arg Val Ser Glu Leu Gly Leu Gly Tyr Ala Ser Asp Glu Thr Val Leu
20 25 30

50 Phe Arg Tyr Cys Ala Gly Ala Cys Glu Ala Ala Ala Arg Val Tyr Asp
35 40 45
Leu Gly Leu Arg Arg Leu Arg Gln Arg Arg Arg Leu Arg Arg Glu Arg
50 55 60

55 Val Arg Ala Gln Pro Cys Cys Arg Pro Thr Ala Tyr Glu Asp Glu Val
65 70 75 80
Ser Phe Leu Asp Ala His Ser Arg Tyr His Thr Val His Glu Leu Ser
85 90 95
Ala Arg His Cys Ala Cys Val
100

65 (2) INFORMATION FOR SEQ ID NO:5:

76

066780" 944260

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 197 amino acids
 (B) TYPE: amino acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

| | | | | | | | | | | | | | | | | |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 15 | Met | Gln | Arg | Trp | Lys | Ala | Ala | Ala | Leu | Ala | Ser | Val | Leu | Cys | Ser | Ser |
| | 1 | | | | 5 | | | | | 10 | | | | | 15 | |
| | Val | Leu | Ser | Ile | Trp | Met | Cys | Arg | Glu | Gly | Leu | Leu | Leu | Ser | His | Arg |
| | | | | 20 | | | | | 25 | | | | | 30 | | |
| 20 | Leu | Gly | Pro | Ala | Leu | Val | Pro | Leu | His | Arg | Leu | Pro | Arg | Thr | Leu | Asp |
| | | | 35 | | | | | 40 | | | | | 45 | | | |
| 25 | Ala | Arg | Ile | Ala | Arg | Leu | Ala | Gln | Tyr | Arg | Ala | Leu | Gln | Gly | Ala | |
| | | 50 | | | | | 55 | | | | | 60 | | | | |
| | Pro | Asp | Ala | Met | Glu | Leu | Arg | Glu | Leu | Thr | Pro | Trp | Ala | Gly | Arg | Pro |
| | 65 | | | | 70 | | | | | 75 | | | | | | 80 |
| 30 | Pro | Gly | Pro | Arg | Arg | Arg | Ala | Gly | Pro | Arg | Arg | Arg | Arg | Ala | Arg | Ala |
| | | | | | 85 | | | | | 90 | | | | | 95 | |
| | Arg | Leu | Gly | Ala | Arg | Pro | Cys | Gly | Leu | Arg | Glu | Leu | Glu | Val | Arg | Val |
| | | | | 100 | | | | | 105 | | | | | 110 | | |
| 35 | Ser | Glu | Leu | Gly | Leu | Gly | Tyr | Ala | Ser | Asp | Glu | Thr | Val | Leu | Phe | Arg |
| | | | 115 | | | | | 120 | | | | | 125 | | | |
| 40 | Tyr | Cys | Ala | Gly | Ala | Cys | Glu | Ala | Ala | Ala | Arg | Val | Tyr | Asp | Leu | Gly |
| | | 130 | | | | | 135 | | | | | 140 | | | | |
| | Leu | Arg | Arg | Leu | Arg | Gln | Arg | Arg | Arg | Leu | Arg | Arg | Glu | Arg | Val | Arg |
| | 145 | | | | | 150 | | | | | 155 | | | | | 160 |
| 45 | Ala | Gln | Pro | Cys | Cys | Arg | Pro | Thr | Ala | Tyr | Glu | Asp | Glu | Val | Ser | Phe |
| | | | | | 165 | | | | | 170 | | | | | 175 | |
| | Leu | Asp | Ala | His | Ser | Arg | Tyr | His | Thr | Val | His | Glu | Leu | Ser | Ala | Arg |
| | | | | 180 | | | | | 185 | | | | | 190 | | |
| 50 | Glu | Cys | Ala | Cys | Val | | | | | | | | | | | |
| | | | | 195 | | | | | | | | | | | | |